

## **Remarks**

Claims 1-16 are pending in the application.

Claims 1-6, 10-12, and 14-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bennett et al. (U.S. Patent No. 5,367,139, hereafter '139), in view of Shinriki et al. (W/O 02/15243, hereafter '243). U.S. Patent No. 6,806,211, hereafter '211, is cited for corresponding English version of the '243. Applicant requests the Examiner reconsider this rejection in view of the following remarks.

Claim 1 recites an apparatus, that includes a chamber adapted to receive a first precursor gas; at least one surface interior to the chamber; a piezoelectric liner coupled to the at least one surface of the chamber; and an acoustic wave driver is deployed on the piezoelectric liner.

This claim stands rejected as obvious in view of two references, the '139 reference and the '211 reference.

In accordance with MPEP § 2143, "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. Exemplary rationales that may support a conclusion of obviousness include: Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention."

Here the Examiner indicates on pages 3 and 4 of the pending office action that the '139 reference does not teach the limitations of a piezoelectric liner coupled to the at least one surface of the chamber; and an acoustic wave driver deployed on the piezoelectric liner. The Examiner goes on to indicate that the '211 reference teaches the use of quartz lined chambers and that "for the purposes of avoiding contamination" it would have been obvious to modify the '139 reference to include the quartz liner of the '211 reference and have the acoustic wave driver of the '139 reference deployed thereon.

Applicant respectfully submits that this combination is not supported to the extent required by the Supreme Court in that "for the purposes of avoiding contamination" cannot be considered a clear articulation of the reasons why the claimed invention would have been obvious.

The Examiner is respectfully requested to reconsider the teachings of the '211 reference. Only once in the entire 30 figure and 32 column specification does the '211 reference mention contamination and that is at lines 48-52 of Col. 18. At this point in the '211 specification it is specifically taught that "Contamination during the substrate processing process performed within the inner processing container 202 is avoided by keeping the sealed space at a higher vacuum through an exhaust opening (not shown) than the inside of the inner processing container 202." The '211 specification does not specifically teach or even suggest the use of quartz within a semiconductor processing chamber to avoid contamination. In fact

the '211 specification provides no reason for the use of quartz within the inner processing chamber.

Recall that the present claims recite an apparatus that includes an acoustic wave driver deployed on a piezoelectric liner. The Examiner is requested to appreciate that the claim recites a combination of an acoustic wave driver which can generate a mechanical force in the form of sonic waves with a liner that can generate an electric potential when exposed to mechanical forces. The cited references either alone or in combination do not recognize these features. For at least the reason that the record does not provide a clear articulation of the reasons why the claimed invention is obvious, the rejection must be withdrawn.

Claims 2-16 depend from claim 1 and are allowable for at least the reasons given above regarding claim 1.

Applicant requests allowance of claims 1-16 in the Examiner's next action. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the Examiner is requested to contact the undersigned at (509) 624-4276 between the hours of 8:00 a.m. and 5:00 p.m. (PST).

Respectfully submitted,

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By: 

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